

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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S-E-C-R-E-T

50X1-HUM

COUNTRY USSR (Leningrad Oblast)

REPORT

SUBJECT Military Academy of Electrical
Communication i/n S.M. Budenny

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

Military
Academy of Electrical Communication i/n S.M. Budenny in Leningrad

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2. The report contains information on the Academy's research program, administrative organization, training activity, educational program, and physical layout.

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STATE	X	ARMY	X	NAVY	X	AIR	X	NSA	X	FBI		NIC	X	JCS	X
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ONLY ONE ORIGINAL MADE.

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INFORMATION

ACADEMY OF COMMUNICATION.

[REDACTED]

[REDACTED]

A group of students of the Lenin- 50X1-HUM

grad Military School of Communication (LVUS) [REDACTED]

[REDACTED]

received permission from the highest army authorities 50X1-HUM

to make use of the Academy's laboratory in order to conduct a number of 50X1-HUM
radio-technical experiments.

2. The Academy and LVUS thus have established a continuous contact
(which was based on the similarity of their programs, exchange of practical
experiences, technical information, draining and technical equipment, etc.)

3. Many of LVUS teachers were former students of the Academy and kept
up their contacts with the Academy, and so it is only natural that they
frequently shared their recollections with the LVUS students.

4. The LVUS was one of the sources from which the Academy acquired its
new students, thus providing a source of numerous information pertaining
to the Academy.

[REDACTED]

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The address of the Academy of Communications, named in honour of
BUDENNNYY, is as follows: LENINGRAD, VYBORGSKAYA STORONA, OZERKI.

The academy is not registered with the Post Office.

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Its address is decoded, as it is the case with most well known military educational institutions in the Soviet Union.

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In addition to the main building, the Academy has an annex, which was created in 1952 (on the Suvorovskiy Prospekt, the former LVUS building, No.

144.

The address is as follows:

SMOL'NINSKIY RAYON, ^{Ro}SUVOROVSKIY PROSPEKT, No. 144.

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Transportation means:

Trolley car No. 9; the trolley stops near the LITEYNIY MOST (bridge), on the left bank of the NEVA river; route-OZERKI.

By train: FINLYANDSKIY VOKZAL-train going to LEVASHEVO station; disembark in OZERKI (it is a suburban electric train called "ELEKTRICHKA").

A general plan of the locality where the Academy is situated and of the building's interior (enclosure No. 1.)

(NOT TO SCALE)

Conventional Signs:

1. Main entrance;
2. Guard (MVD guard troopers);
3. Vestibul;
4. Banner of the Academy;
5. Bureau issuing passes;
6. Elevators;
7. Two entrances leading to the shops of the Academy;
8. Outside entrance to the Academy;
9. Three additional exits (lower floor);
10. Operational-experimental radio stations;

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The general plan of the room locations on the other floors is approximately the same. The only difference may be only in room designations.

In some places the corridors and passages are equipped with mobile (sliding) grates made of thick steel wire, which, when required, can close up entrances or cut off accesses to some parts of the building.

The windows, for the exception of the ones located in rooms reserved for special purposes, are not equipped with grates. Students of the Academy are permitted to move freely through the interior of the building, however, they cannot enter any premises where signs "For official personnel only" are displayed.

Specifications of the Academy's interior (in relation to the main entrance):

Left wing of the 1st floor: Administrative and managerial services;

Right wing: Faculty of combined arms disciplines;

Second floor: Exactly the same thing but more specialized (training courses for military officials of communication forces.)

Third floor: Radio-technical faculty (including laboratories and other training quarters).

Fourth floor: Electro-technical faculty (some of its laboratories are located on the lower floors - for instance, the cycles of applied electro-techniques have their classes on the first floor).

The basement: Radio-assembly, exploitation work, communication equipment storehouses, training aids etc.

Guard: MVD troops who are under orders from the KGB regional Administration as well as from the chief of the Academy.

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Its functions are: to guard all entrances and exits; check documents; guard against fire hazards; safeguard service-experimental radiostations (No. 10 on the plan) etc.

Organizational structure of the Academy and cadres (student's personnel).

In a general way the purpose of the Academy of Communication can be described as follows: Preparation of highly qualified officers to take charge over large communication units and combined arms forces (communication chiefs, radio-control (radar) service men, engineers and technicians servicing Communication Centers and administration points, construction and research workers, specialists on SVCH technique (ultra high frequency radar and radio-relay communication) etc.

Thus we can see that the training program of the Academy covers two fields:

1. Combined arms;
2. Radio-technical;

The Academy has several faculties, most important of which are the following;

1. Communication services (changed to Communications organization in 1951);
2. Radiotechniques;
3. Electrotechniques;
4. Telephony and telegraphy;

On the personnel of the Academy the following can be said:

1. The majority of teachers have from 15 to 25 years of actual experience and are highly qualified. The teacher's and professor's rate of pay is high-around five thousand. They live either in houses, which belong to the Academy or in private (communal) apartments.

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2. The students - most of them recently were young men, 25-30 years old, with high school education

The Academy also has a special category of students, graduates from the civil institute or simply young men with an average education. For such men the Academy has special classes where the training courses are speeded up. After a year (or two) of training these young men are promoted to the ranks of junior lieutenants and drafted into general service. At the present time the number of students who are veteran officers of the last war, is considerably smaller. The latter are most frequently channeled to KUUKS (advanced courses for commanding officers) thus creating more vacancies in the Academy for younger men. It should be noticed that the Academy is constantly in need of new students to fill the created vacancies. For this reason a special decree was issued by the Ministry of Defense (N. BULGANIN) which permits all men, regardless where they may be employed, after passing preliminary examinations at any Military OKRUG, try their luck in passing the Academy of Communication's entrance exams. All expenses connected with the trip to the Academy are repaid by the government.

Academy students, as a rule, retain their army pay, and all other categories of compensation or material provisions, which they are granted (uniforms, tailoring services, rental payments etc. After graduation all students are automatically promoted to the next higher rank even if they served only a short time in their respective ranks.

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ORGANIZATION OF TRAINING PROCEDURE

The training program - plan is arranged by each faculty in accordance with the requirements set up by the Communication's Administration of the General Headquarters of the Armed Forces.

The program provides a vast number of disciplines, (beginning from the Soviet Army Codex and ending with Political Economy). For instance, the Communication Services Faculty organizes its training program in the following manner (approximately):

The first year (normal course) - combined arms disciplines (Soviet Army Codex, ^{regulations} tactics, ballistics, the history of military science, political disciplines (history of KPSS, political economy, questions pertaining to internal and external politics), electrotechniques, radiotechniques, modern means of communication technique, english language.

The second year - specialization in various disciplines and themes. Organizational structure of Soviet Armed Forces, tactics, strategy, communication services, technical subjects (radiotechnique, electrotechnique, linear tactics).

Third year - broader deployment of indicated themes, exams on elementary combined arms disciplines, and the introduction of new ones such as: study of tactics, organizational structure of foreign armies (emphasis on American, English and French (the organizational principles of communication techniques in those armies), the study of tactical and technical properties of communication means, practical training.

Forth year - special disciplines, combining practice with theory, perfection of studied disciplines, field training, solution of complicated tactical communication problems etc.

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Fifth year: Consolidation of past studies, latest technical achievements, independent training under field conditions (in camps situated in the KRASNOYE SELO region), preparations for State exams.

Marginal note: On all faculties a study is made of the organizational structure of foreign armies, of the principles and organizational methods of communication in foreign armies, of experiences gained in the Korean War and of the peculiarities of combat strategy in a war when atomic and incendiary missiles are employed.

SCIENTIFIC RESEARCH

There are good reasons to believe that the Academy of Communication, being one of the largest military training institutions in the country, in addition to its teaching program, is also engaged in diversified scientific research work. During the last war it was established that numerous Soviet means of communication were inadequate and outdated. Particularly it was seriously lagging behind in the SVCH (UXV) technique. Approximately in 1946, the TSK issued a special regulation for the purpose of finding appropriate measures to liquidate this deficiency. As a result of these measures, a group of Soviet radio engineers of the second generation, using foreign models as a base, constructed at the Moscow suburban scientific and research institute a Soviet decimeter radiostation, type RRL-6, which, according to the opinion of the majority of men, who conducted technical test, has a very great operating stability. However, its very high net cost and the absence of separate removable units, which makes quick repairs very difficult, reduced the general evaluation of this station. The construction of this radiostation laid the bases for further progress of radio-relay communications in the Soviet Union. Up until not so long ago Soviet Army utilized mainly German made radio-relay apparatus (captured decimeter radiostations

of the DMG type-two telephone and one telegraph channel, or the more modern decimeter, communication type radio-stations RDS - 1 (RRL-8). Now, however, the picture is ^{dr}dranging rapidly: the DMG's have been almost completely replaced by other types and the RDS-1 meets a serious competition from RLL-6.

During the same period (1946-49) considerable efforts were made to manufacture Russian made radar (radio location) apparatus, and by 1950 the Soviet military radio industry was able to establish a powerful PVO ~~IN~~ various parts of the Soviet Union.

In all these undertakings the Academy of Communication took either a direct or at least an active part. Moreover, there are reasons to believe that a group of the Academy teaching personnel, headed by chief of the radio-technical faculty, professor ISYUMOV, are responsible for the theoretical calculations for receiving amplifying stages, later successfully applied in the RRL-6 and RL-1 (decimeter radio station and radar) working schemes. Taking advantage of the abundantly equipped material and technical bases, a group of science teachers of the Academy carried out a series of experiments in the SVCH oscillation (1-10 cm. wave lengths) zone, as well as on calculations pertaining concentration schemes, transfer of SVCH OSCILLATIONS TO VARIOUS DISTANCES, radio interference prevention etc. It is important to observe that all this research work however, was of a secondary character and had no reflections on the training program. It is not logical to impose that the Academy was engaged in any kind of research work on a ground scale. Most likely it was only carrying out

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various secret assignments pertaining to problems connected with communication procedures. It is well known, for instance, that the Academy of Communication renders various technical assistance to radio manufacturing shops and other establishments connected with the production of communication means. The Academy was taking part in the organizing of radar courses in PUSHKINO city, rendered its technical assistance in laying and adjusting of the coaxial telephone cable Moscow-Leningrad, in building of retransmitting transfer lines for television, in the layout of the combination communication project between the shores and the underwater forts in the Gulf of Finland, in the antiaircraft zones calculations (the Baltic sea zone was one of them) etc.

There have been rumors that some of the engineering and technical personnel of the Academy, together with other outstanding representatives of the scientific world of Leningrad, belong to a special group, selected to carry out especially important state problems. Included in this group' are also a number outstanding representatives of Soviet Union scientific and technical personnel, such as, BERG, SIFOROV, SLEPYAN, IZYUMOV and a number of others.

It should be noted that students of the Academy are drafted for such work with reluctance, evidently to avoid any infiltration of rumors about the going on projects.

SCIENTIFIC RESEARCH PROJECTS

Research work in the domain of SVCH, which was initiated right after the war, introduced a lot of changes in the distribution of scientific and technical forces. The Academy of Communication, due to its excellent locations (Leningrad being the largest cultural center of Russia where many scientific and technical institutions are situated and where highly

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qualified personnel can be found etc), because the scientific research center of ultra high frequencies diapason. However, it must be admitted that in this field (in reference to its practical application) the Soviet Union is still lagging behind leading foreign countries such as: USA, Germany and England. Partially it is lagging behind in problems concerning the consolidation of radio communication lines, telemechanics and radio-automatization.

At the present time the main efforts are concentrated upon theoretical research work, pertaining to properties of UKV, exploitation of antenna arrangements, estimation of receiving and transmitting systems in the UKV diapason, long distance transmission of electro-magnetic energy (of different diapasons), elimination of various interference problems. I am also inclined to believe that the Academy was instrumental in the creation of a radio-jamming network on the territory of the Soviet Union.

It was also know that at one time the Academy concentrated its efforts on the construction of certain generators commonly called "TRESHCHETKI" (the technical nomenclature for this device is not known).

Approximately 5 or 6 years ago the TSK party confronted scientists engaged in radio, telephone and telegraph communication research work with the following problems (approximately):

1. Complete mastery of the UKV diapason;
2. The development of the decimeter communication technique and systems of multichannel radio communication.
3. Automatization of radio service;
4. The development of telecontrol technique and money other items.

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At the present time in the USSR there are in existence two points of view on the question pertaining modulation of oscillations (the initiative and calculations forwarded by the Academy):

- in the meso-wavelengths (intermediate diapason, 200-50 m.) frequency modulation;
- in the UKV (10-1 cm.) impulse phase;
- on various antenna arrangements, such as long, medium and complex (rhombic, "GITARA" type, NADENKO type for individual designation);
- short wave, UKV cophasal, vibratory, parabolic, directional etc.);
- generation of oscillations by means of various magnetronic systems or cavity resonators for UKV;

In the medium and long wave diapason - conventional methods, however with the addition of various improvements which would raise the stability of oscillations.

The intake channel - a tendency toward the improvement of selective properties and interference elimination (regeneration, composit turning of intermediate contours etc.).

In one way or other the Academy is responsible for the majority of these improvements.

COMMUNICATION SYSTEMS

Up until recently communication lines were serviced primarily with combined arms apparatus (radio stations RAF, RAT, STSR, RSB-F, stationary installations, special attachments for telegraphic work etc.). However, lately radio-relay apparatus is put in operation at an ever increasing rate. Already in 1951 there was a rumor that the trans-Siberian telephone line will be duplicated by radio-telephone apparatus, and radio-relay

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communication means will be established directly between Moscow and Pekinoj. An order which was placed by the Peking government in the Eastern Zone of Germany and the Soviet Union for the construction of many more radiostations (including radio-relay stations) supply the basis for such assumption.

There is a plan in existence to connect in the near future a number of military districts with Moscow by means of radio-rebroadcasting stations. Up until the present time, for military communications, (on Soviet Union territory) only communication means which were at the disposal of the

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